

ABSTRACT OF THE DISCLOSURE

The present invention provides an oxide film etching method performed by using an etching apparatus in which an oxide film formed on a target object to be processed is etched by utilizing a plasma generated within the process chamber by application of a high frequency power. The etching gas introduced into the process chamber in the etching step contains a  $C_4F_6$  gas and an  $O_2$  gas, and the ratio  $C_4F_6/O_2$  of the  $C_4F_6$  gas to the  $O_2$  gas falls within a range of 0.7 and 1.5 so as to increase the etching selectivity of the oxide film relative to a resist film.